



STATE OF MARYLAND

DHMH

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February 24, 2012

Public Health & Emergency Preparedness Bulletin: # 2012:07 Reporting for the week ending 02/18/12 (MMWR Week #07)

CURRENT HOMELAND SECURITY THREAT LEVELS

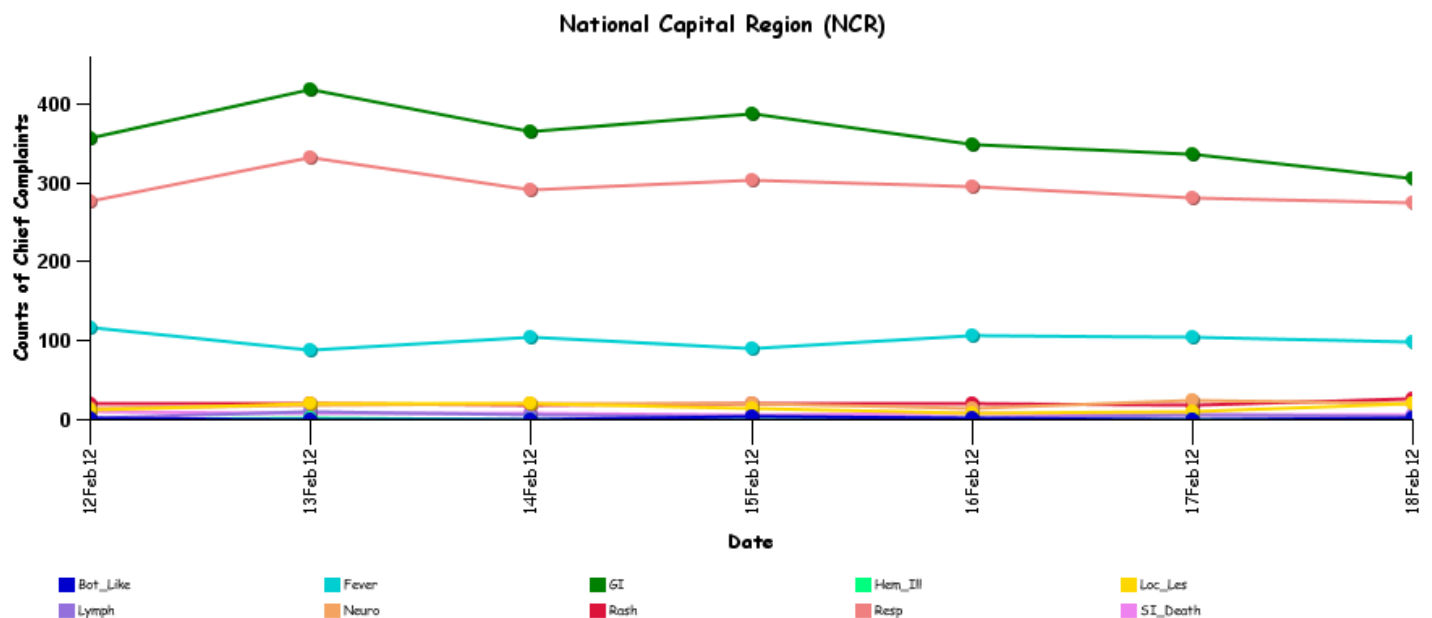
National: No Active Alerts
Maryland: Level One (MEMA status)

SYNDROMIC SURVEILLANCE REPORTS

ESSENCE (Electronic Surveillance System for the Early Notification of Community-based Epidemics):

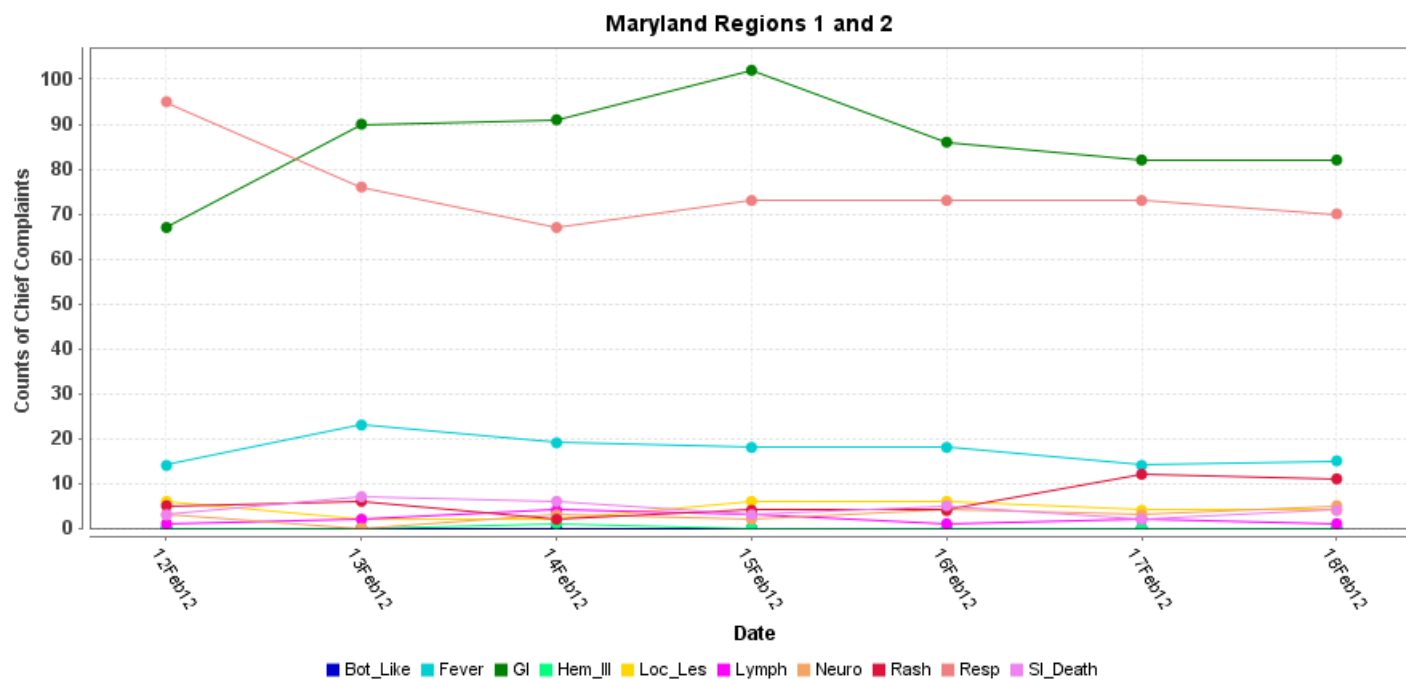
Graphical representation is provided for all syndromes, excluding the "Other" category, all age groups, and red alerts are circled. Red alerts are generated when observed count for a syndrome exceeds the 99% confidence interval. Note: ESSENCE – ANCR uses syndrome categories consistent with CDC definitions.

Overall, no suspicious patterns of illness were identified. Track backs to the health care facilities yielded no suspicious patterns of illness.

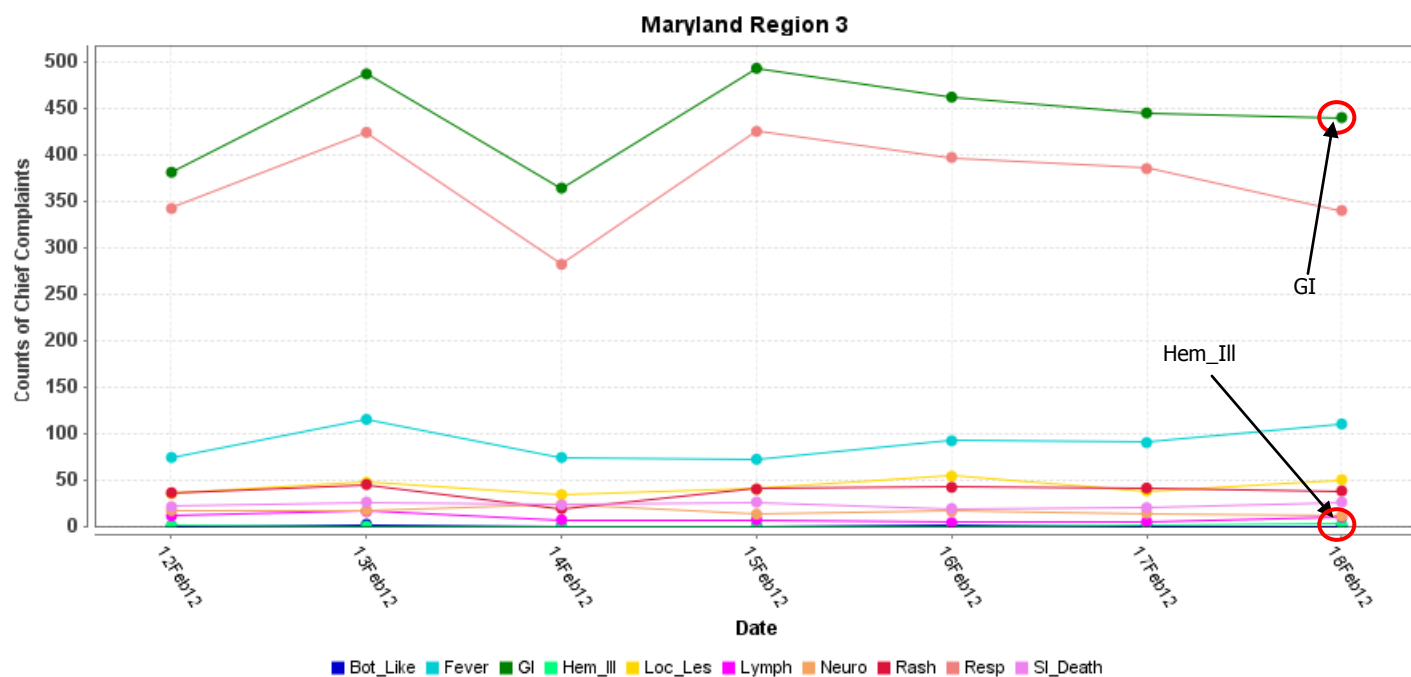


*Includes EDs in all jurisdictions in the NCR (MD, VA, and DC) reporting to ESSENCE

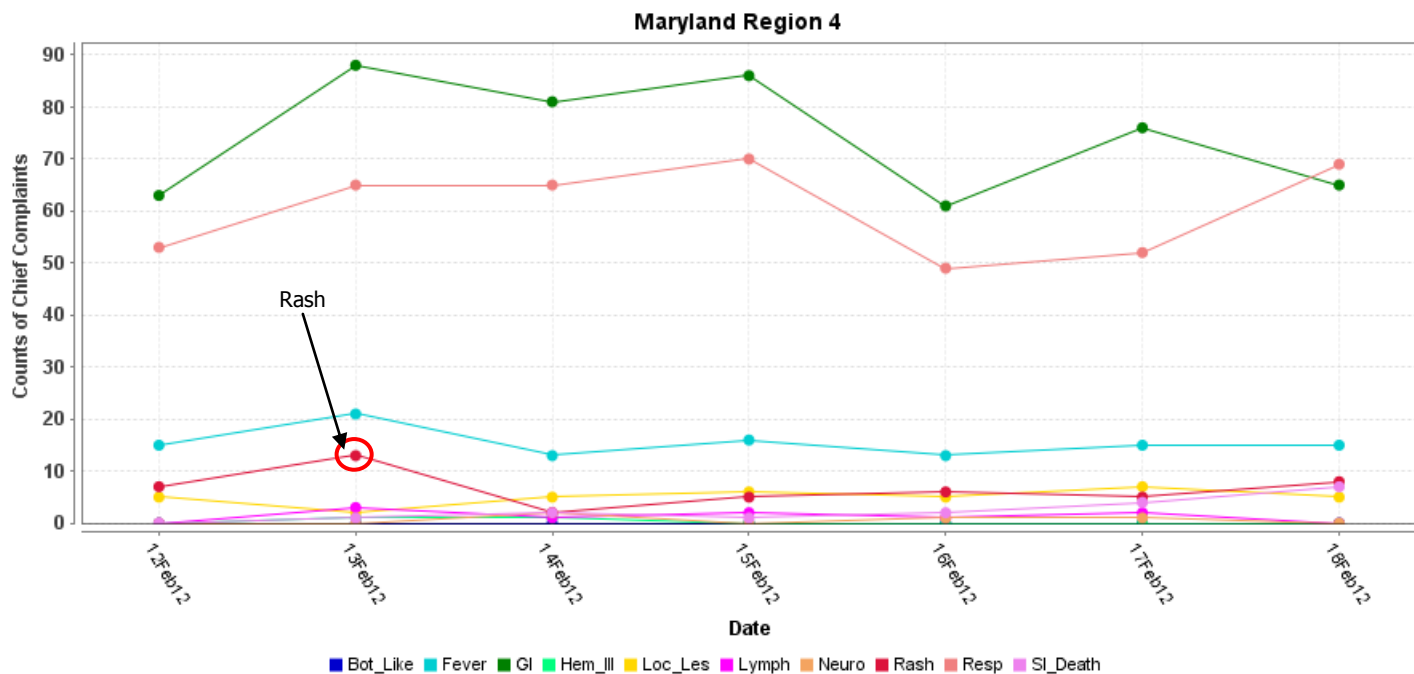
MARYLAND ESSENCE:



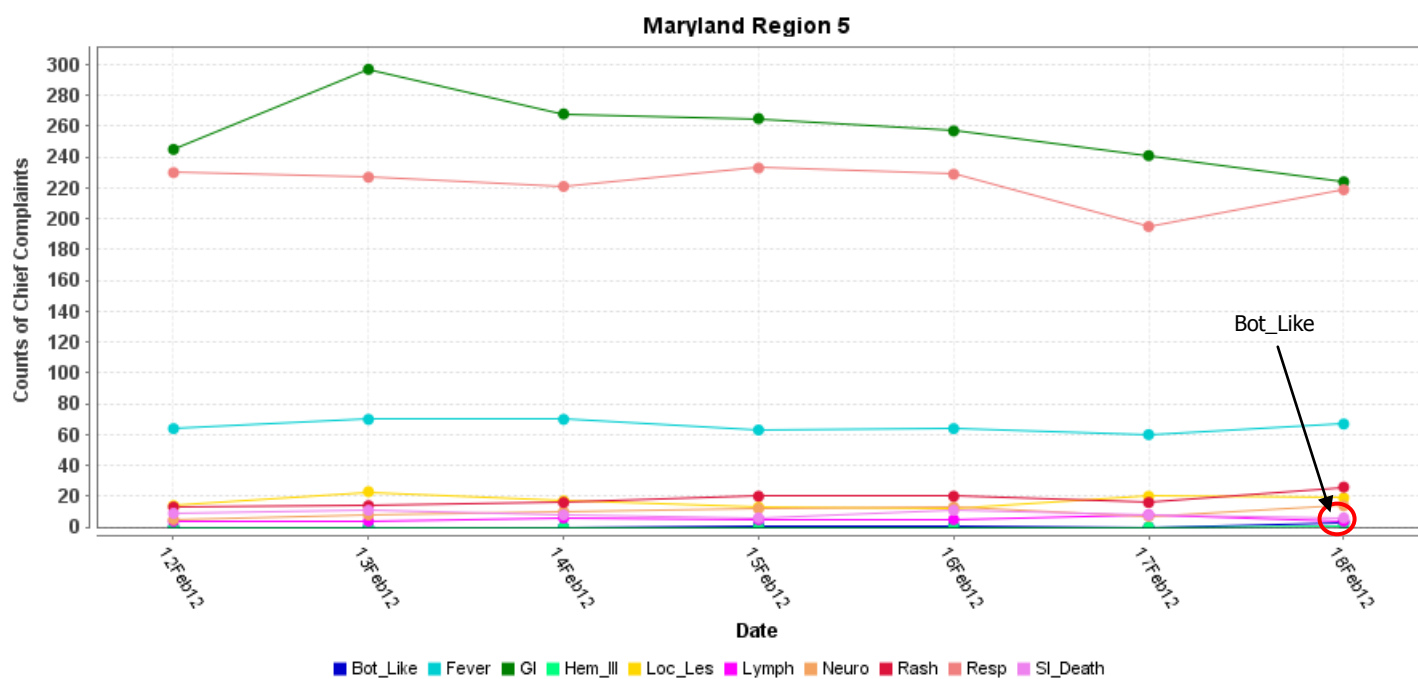
* Region 1 and 2 includes EDs in Allegany, Frederick, Garrett, and Washington counties reporting to ESSENCE



* Region 3 includes EDs in Anne Arundel, Baltimore City, Baltimore, Carroll, Harford, and Howard counties reporting to ESSENCE



* Region 4 includes EDs in Cecil, Dorchester, Kent, Somerset, Talbot, Wicomico, and Worcester counties reporting to ESSENCE

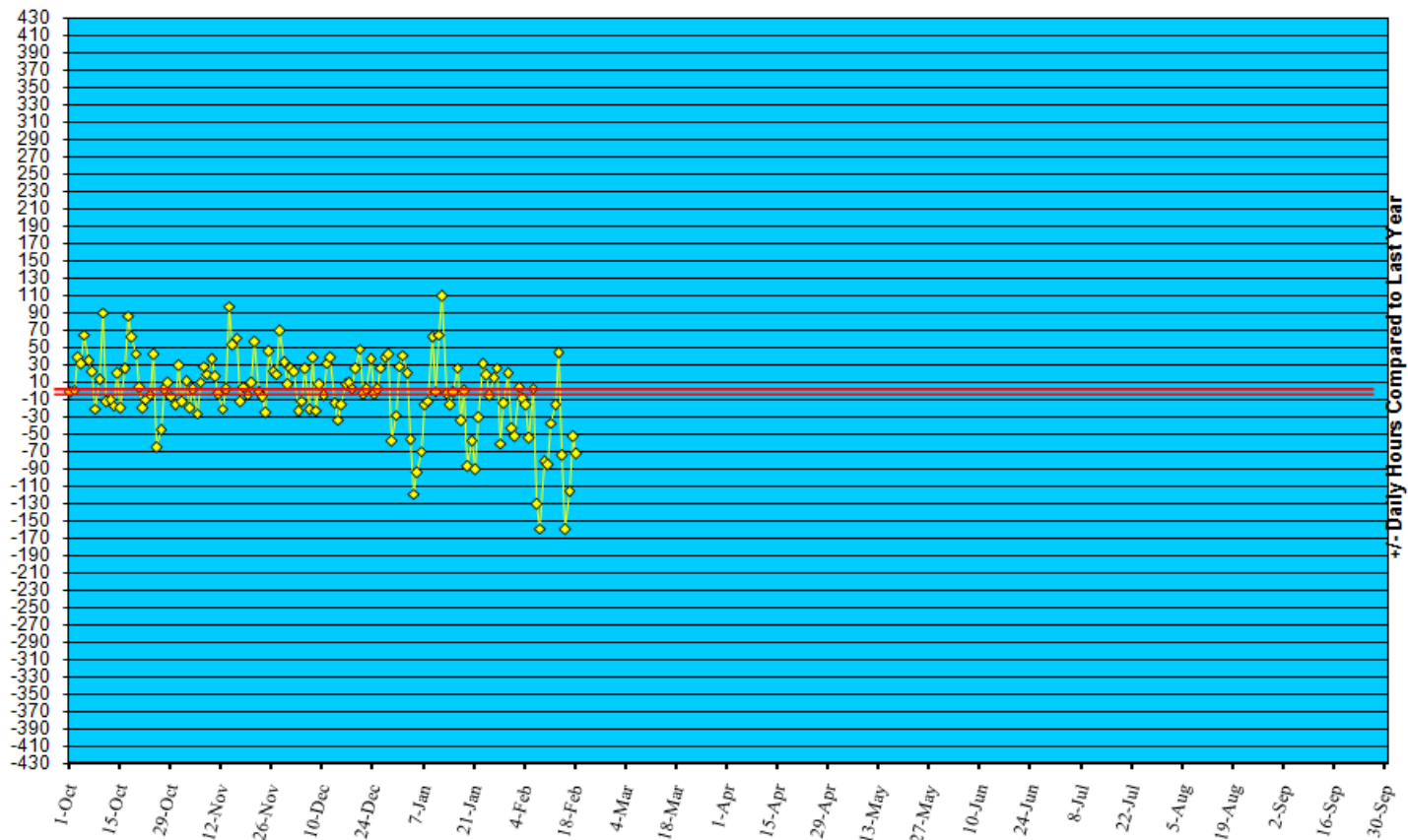


* Region 5 includes EDs in Calvert, Charles, Montgomery, Prince George's, and St. Mary's counties reporting to ESSENCE

REVIEW OF EMERGENCY DEPARTMENT UTILIZATION

YELLOW ALERT TIMES (ED DIVERSION): The reporting period begins 10/01/11.

Statewide Yellow Alert Comparison Daily Historical Deviations October 1, '11 to February 18, '12



REVIEW OF MORTALITY REPORTS

Office of the Chief Medical Examiner: OCME reports no suspicious deaths related to an emerging public health threat for the week.

MARYLAND TOXIDROMIC SURVEILLANCE

Poison Control Surveillance Monthly Update: Investigations of the outliers and alerts observed by the Maryland Poison Center and National Capital Poison Center in January 2012 did not identify any cases of possible public health threats.

REVIEW OF MARYLAND DISEASE SURVEILLANCE FINDINGS

COMMUNICABLE DISEASE SURVEILLANCE CASE REPORTS (confirmed, probable and suspect):

Meningitis:	<u>Aseptic</u>	<u>Meningococcal</u>
New cases (February 12 – February 18, 2012):	10	0
Prior week (February 5 – February 11, 2012):	7	0
Week#7, 2011 (February 13 – February 19, 2011):	8	0

16 outbreaks were reported to DHMH during MMWR Week 7 (February 12 – 18, 2012)

13 Gastroenteritis outbreaks

7 outbreaks of GASTROENTERITIS in Nursing Homes

4 outbreaks of GASTROENTERITIS in Assisted Living Facilities

2 outbreak of GASTROENTERITIS in a Schools

1 Foodborne outbreak

1 outbreak of GASTROENTERITIS/FOODBORNE associated with a Workplace

1 Respiratory illness outbreaks

1 outbreak of INFLUENZA/PNEUMONIA in an Assisted Living Facility

1 Rash illness outbreak

1 outbreak of CHICKENPOX in a Daycare Center

MARYLAND SEASONAL FLU STATUS

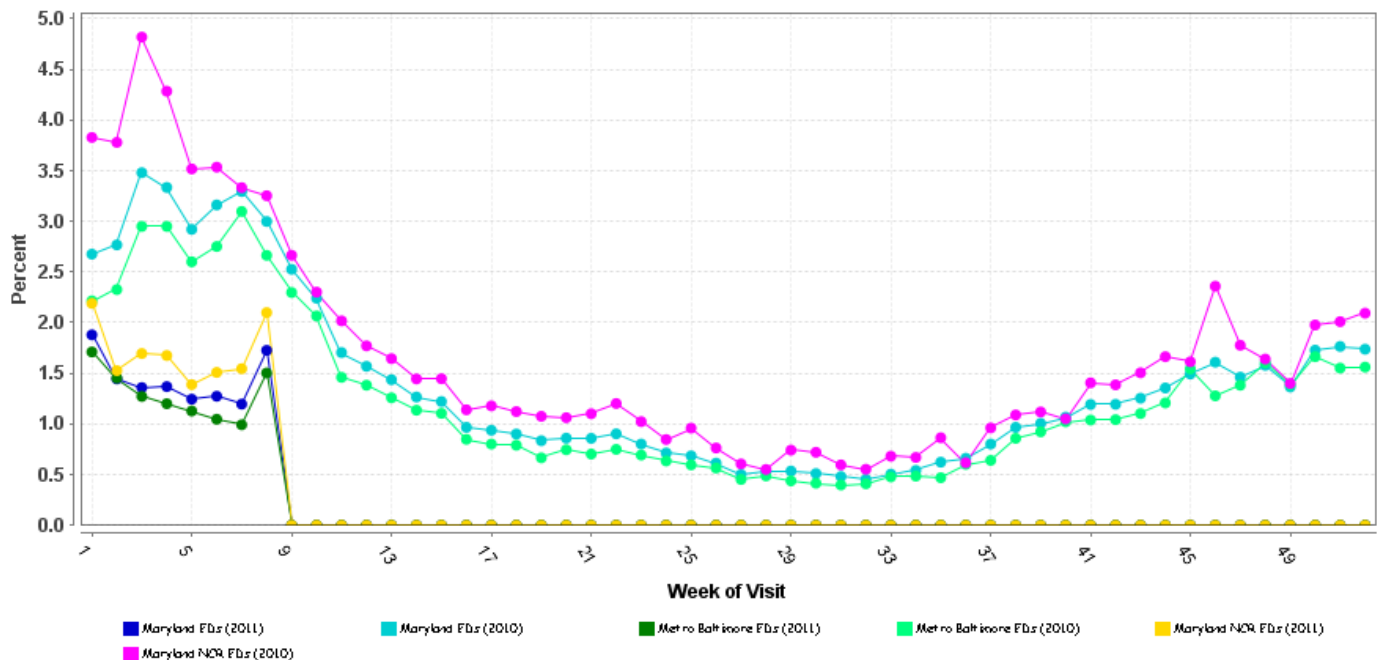
Seasonal Influenza reporting occurs October through May. Seasonal influenza activity for Week 7 was: Sporadic Activity, Low Intensity.

SYNDROMIC SURVEILLANCE FOR INFLUENZA-LIKE ILLNESS

Graphs show the percentage of total weekly Emergency Department patient chief complaints that have one or more ICD9 codes representing provider diagnoses of influenza-like illness. These graphs do not represent confirmed influenza.

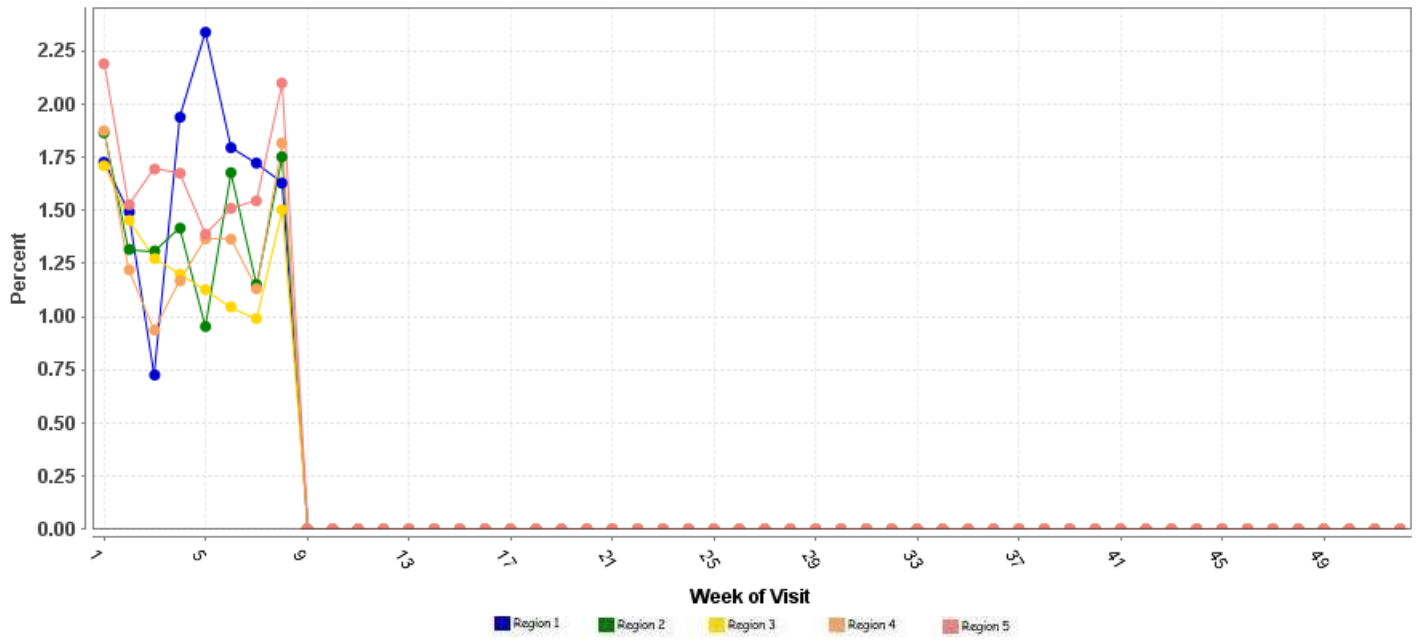
Graphs show proportion of total weekly cases seen in a particular syndrome/subsyndrome over the total number of cases seen. Weeks run Sunday through Saturday and the last week shown may be artificially high or low depending on how much data is available for the week.

Weekly Percentage of Visits for ILI



* Includes 2011 and 2012 Maryland ED visits for ILI in Metro Baltimore (Region 3), Maryland NCR (Region 5), and Maryland Total

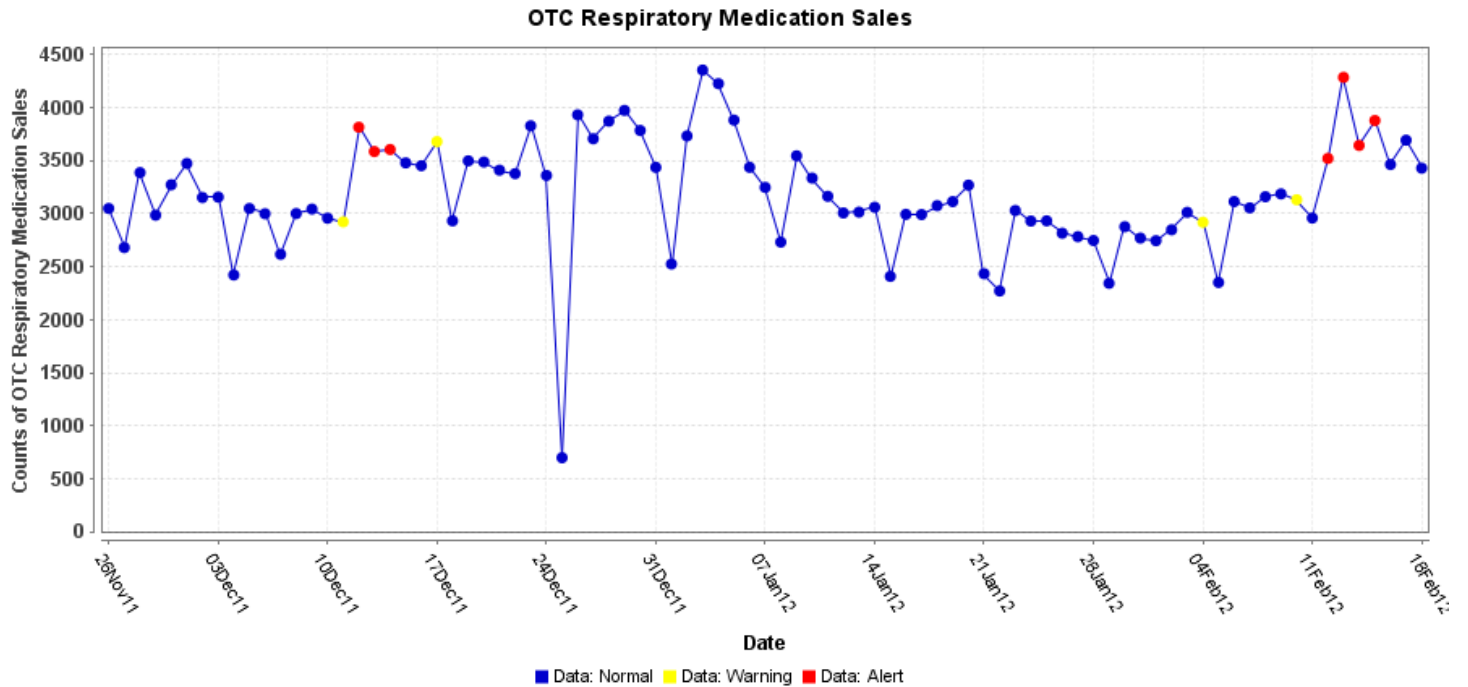
Weekly Percentage of Visits for ILI



*Includes 2012 Maryland ED visits for ILI in Region 1, 2, 3, 4, and 5

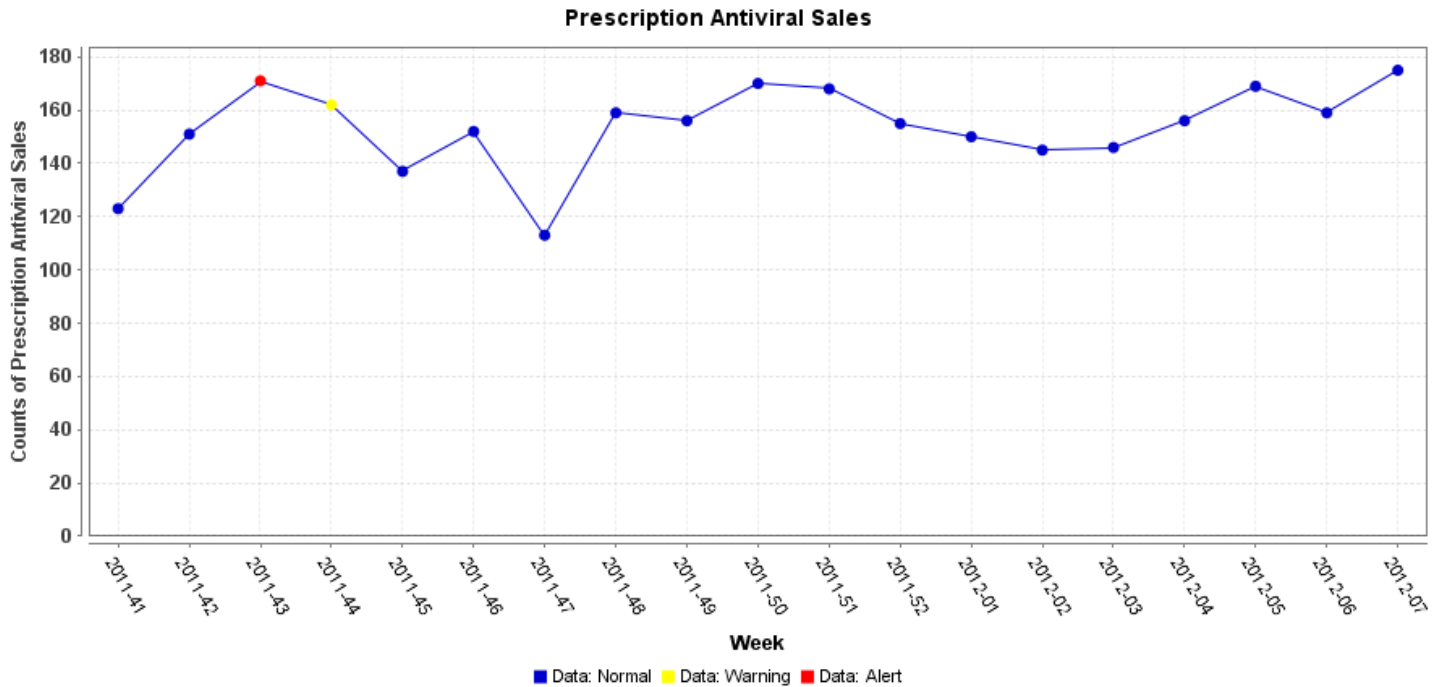
OVER-THE-COUNTER (OTC) SALES FOR RESPIRATORY MEDICATIONS:

Graph shows the daily number of over-the-counter respiratory medication sales in Maryland at a large pharmacy chain.



PRESCRIPTION ANTIVIRAL SALES:

Graph shows the weekly number of prescription antiviral sales in Maryland.



PANDEMIC INFLUENZA UPDATE / AVIAN INFLUENZA-RELATED REPORTS

WHO update: The current WHO phase of pandemic alert for avian influenza is 3. Currently, the avian influenza H5N1 virus continues to circulate in poultry in some countries, especially in Asia and northeast Africa. This virus continues to cause sporadic human infections with some instances of limited human-to-human transmission among very close contacts. There has been no sustained human-to-human or community-level transmission identified thus far.

In **Phase 3**, an animal or human-animal influenza reassortant virus has caused sporadic cases or small clusters of disease in people, but has not resulted in human-to-human transmission sufficient to sustain community-level outbreaks. Limited human-to-human transmission may occur under some circumstances, for example, when there is close contact between an infected person and an unprotected caregiver. However, limited transmission under such restricted circumstances does not indicate that the virus has gained the level of transmissibility among humans necessary to cause a pandemic.

As of February 8, 2012, the WHO-confirmed global total of human cases of H5N1 avian influenza virus infection stands at 584, of which 345 have been fatal. Thus, the case fatality rate for human H5N1 is approximately 59%.

NATIONAL DISEASE REPORTS

CAMPYLOBACTERIOSIS (USA): 17 February 2012, The number of people sickened by raw milk linked to a Franklin County farm has climbed to 77, possibly making it the largest outbreak in Pennsylvania history. Pennsylvania Department of Health officials said on Thu 16 Feb 2012 that the total number of cases continued to increase. The department has identified 67 cases in Pennsylvania, 5 in Maryland, 2 in New Jersey, and 3 in West Virginia. Individuals suffered digestive issues associated with a *Campylobacter jejuni* bacterial infection. The bacterium has been linked to unpasteurized milk sold by the Family Cow farm in Chambersburg, Pennsylvania. "This outbreak has now become the largest outbreak associated with raw milk in Pennsylvania in at least the past 2 decades," health department spokeswoman Holli Senior wrote in an email. The people who became sick from the raw milk fell ill between 17 Jan 2012 and 1 Feb 2012, Senior said. Patients range in age from 2 to 74 years old, with about 34 per cent of them younger than 18, she said. On 6 Feb 2012, the Pennsylvania Department of Agriculture cleared the dairy to resume production, which it had halted voluntarily. The department inspected the milking parlor and bottling areas. Agriculture department officials did not immediately return a call on Thu 16 Feb 2012, about their testing, but Maryland health officials said they [had] tested 2 unopened samples from the Family Cow farm and found the bacteria. On the Family Cow website, farmer Edwin Shank wrote about changes made at the farm. Those include new hot water and monitoring systems. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

E. COLI EHEC O26 (USA): 16 February 2012, The United States Centers for Disease Control and Prevention (CDC) is collaborating with public health officials in multiple states and the Food and Drug Administration (FDA) to investigate a multistate outbreak of Shiga toxin-producing *Escherichia coli* serogroup O26 (STEC [or enterohemorrhagic *E. coli* EHEC] O26) infections likely linked with eating raw clover sprouts. Public health investigators are using DNA "fingerprints" of *E. coli* bacteria obtained through diagnostic testing with pulsed-field gel electrophoresis (PFGE) to identify cases of illness that may be part of this outbreak. They are using data from PulseNet, the national subtyping network made up of state and local public health laboratories and federal food regulatory laboratories that performs molecular surveillance of foodborne infections. The type of bacteria responsible for this outbreak are referred to as EHEC. EHEC bacteria are grouped by serogroups (such as, O157 or O26). The serogroup found most commonly in USA patients is *E. coli* O157. Other *E. coli* serogroups in the EHEC group, including O26, are sometimes called "non-O157 EHECs." Some types of EHEC frequently cause severe disease, including bloody diarrhea and hemolytic uremic syndrome (HUS). Others, such as common strains of EHEC O26, typically cause milder illness. Currently, there are limited public health surveillance data on the occurrence of non-O157 strains, including O26; therefore, O26 infections may go undiagnosed or unreported. Because non-O157 EHEC infections are more difficult to identify than O157, many clinical laboratories do not test for them. The O26 PFGE pattern in this outbreak has rarely been seen before in PulseNet. A total of 12 persons infected with the outbreak strain of STEC O26 have been reported from 5 states. The number of ill persons identified in each state is as follows: Iowa (5), Missouri (3), Kansas (2), Arkansas (1), and Wisconsin (1). Among persons for whom information is available, illness onset dates range from 25 Dec 2011 to 15 Jan 2012. Ill persons range in age from 9 years to 49 years old, with a median age of 25 years old. All ill persons are female. Among the 12 ill persons, 2 (17 per cent) were hospitalized. None have developed HUS, and no deaths have been reported. Illnesses that occurred after 27 Jan 2012, might not be reported yet due to the time it takes between when a person becomes ill and when the illness is reported. This takes an average of 2 to 3 weeks. Epidemiologic and traceback investigations conducted by officials in local, state, and federal public health, agriculture, and regulatory agencies have linked this outbreak to eating raw clover sprouts. Among the 11 ill persons with information available, 10 (91 per cent) reported eating at a Jimmy John's sandwich restaurant in the 7 days preceding illness. Ill persons reported eating at 9 different locations of Jimmy John's restaurants in 4 states in the week before becoming ill. One location was identified where more than a single ill person reported eating in the week before becoming ill. Among the 10 ill persons who reported eating at a Jimmy John's restaurant location, 8 (80 per cent) reported eating a sandwich containing sprouts, and 9 (90 per cent) reported eating a sandwich containing lettuce. Currently, no other common grocery stores or restaurants are associated with illnesses. FDA's traceback investigation is ongoing. Preliminary traceback information has identified a common lot of clover seeds used to grow clover sprouts served at Jimmy John's restaurant locations where ill persons ate. FDA and states conducted a traceback that identified 2 separate sprouting facilities; both used the same lot of seed to grow clover sprouts served at these Jimmy John's restaurant locations. Preliminary distribution information indicates that sprouts grown from this seed lot were sold at a number of restaurant and grocery store locations in Iowa, Kansas, Missouri, and Wisconsin, and were likely distributed beyond these states. On 10 Feb 2012, the seed supplier initiated notification of sprouting facilities that received this lot of clover seed to stop using it. Investigations are ongoing to identify other locations that may have sold clover sprouts grown from this seed lot. This investigation is ongoing, but preliminary results of the epidemiologic and traceback investigations indicate eating raw clover sprouts at Jimmy John's restaurants is the likely cause of this outbreak. CDC and state and local public health partners are continuing laboratory surveillance through PulseNet to identify additional ill persons and to interview ill persons about foods eaten before becoming ill. FDA is continuing to work closely with CDC and state partners during this investigation. CDC will update the public on the progress of this investigation as information becomes available. Based on previous outbreaks associated with sprouts, investigation findings have demonstrated that sprout seeds might become contaminated in several ways. They could be grown with contaminated water or improperly composted manure fertilizer. They could be contaminated with feces from domestic or wild animals, or with runoff from animal production facilities, or by improperly cleaned growing or processing equipment. Seeds also might become contaminated during harvesting, distribution, or storage. Many clover seeds are produced for agricultural use, so they might not be processed, handled, and stored as human food would. Conditions suitable for sprouting the seed also permit bacteria that might be present on seeds to grow and multiply rapidly. In 1999, FDA released guidance to help seed producers and sprout growers enhance the safety of their products. Specific measures recommended in the guidelines include a seed disinfection step and microbiologic tests of water that has been used to grow each lot of sprouts. The microbiologic tests currently recommended under this guidance would not identify the presence of O26. Preliminary results indicate that this strain of *E. coli* produces Shiga toxin type 1 and does not produce Shiga toxin type 2. (Food Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

INTERNATIONAL DISEASE REPORTS

LEGIONELLOSIS (ITALY): 18 February 2012, Doctors on Friday [17 Feb 2012] reported the first known case of legionnaires' disease, a rare infection usually linked to faulty air conditioning and hot water systems, that was caused by a visit to the dentist. The case report, published in *The Lancet*, describes an unnamed 82 year old woman in Rome who was hospitalized with fever and breathing problems in February 2011. Swiftly diagnosed with infection by *Legionella pneumophila* [a Gram negative bacterium], she died 2 days later of septic shock despite being given heavy doses of antibiotics. During the 2 to 10 days it would have taken for the bacterial [infection] to incubate, the patient had only left her house twice, both times to attend appointments at the dentist. Samples of water were taken from the dentist's tap, from the waterline -- the tube that supplies water to tooth scalars and handpieces used by the dentist -- and from the high pressure pump supplying the waterline itself. All 3 sources tested positive for *L. pneumophila*, but especially in water taken from the pump. Genetic sequencing found that the germs there matched the bacteria that killed the patient. The bug turned out to be a particularly virulent sub-strain called Benidorm. After cleaning with hydrogen peroxide solution and bleach, the water unit was free of contamination. The case is unusual, as outbreaks of legionnaires' disease are generally caused by air conditioning systems, hot water systems, spas, and fountains that are not properly cleaned or maintained. Warm temperatures and periods of water immobility provide a breeding ground for the bacteria. Distributed in fine droplets by a spray, the bacteria are then breathed in. Elderly people or individuals with poor immune systems are those most at risk. Previous research has shown that dental waterlines can be contaminated by the germ, but this is the first known case where illness has occurred. "As far as we are aware, no case of legionnaires' disease has been associated with this source of infection," says the report, headed by Maria Luisa Ricci at the Istituta Superiore de Sanita in Rome. "The case here shows that the disease can be acquired from a dental unit waterline during routine dental treatment. Aerosolized water from high speed turbine instruments was most likely the source of the infection." The case report puts down a series of recommendations, including use of filters, continuous circulation of disinfected water and using sterile water instead of tap water. (Water Safety Threats are listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

MELIOIDOSIS (AUSTRALIA): 14 February 2012, People living in the Top End of the Northern Territory are being warned to protect themselves against the deadly tropical disease melioidosis. The Centre for Disease Control (CDC) says 54 people have contracted the soilborne disease this wet season [2012], and 3 of them have died. It is the largest number of cases recorded this early in the year. CDC director Vicki Krause says the disease is contracted when bacteria enter the body via cuts, sores, or inhalation. The risk of melioidosis will continue for several months, and people need to protect themselves. Dr Krause says people who have underlying conditions like cancer and lung disease should stay indoors during heavy wind or rain. Waterproof footwear and gloves should be worn when handling soil or mud-soaked items. (Melioidosis is listed in Category B on the CDC List of Critical Biological Agents) *Non-suspect case

PLAGUE (UGANDA): 13 February 2012, A fresh outbreak of plague is suspected after 2 people died of similar symptoms in Vurra County, Arua district, where health officials here have put the community on alert. Over the years, plague outbreaks have been emerging from the neighboring DR Congo. When contacted, the district health officer, Dr Patrick Anguzu, said he was still consulting for details of the disease. "I have not yet received a report on the outbreak, but I will try to consult," he said. But the Vurra MP, Dr Sam Okuonzi, told Daily Monitor in a telephone interview that the 2 died in Opiya parish. As a drive to fight the annual disease, in 2009, the Ministry of Health launched a sensitization program for the 2 bordering districts of Nebbi and Arua, where previous outbreaks have occurred. (Plague is listed in Category A on the CDC List of Critical Biological Agents) *Non-suspect case

OTHER RESOURCES AND ARTICLES OF INTEREST

More information concerning Public Health and Emergency Preparedness can be found at the Office of Preparedness and Response website:

<http://preparedness.dhmf.maryland.gov/>

Maryland's Resident Influenza Tracking System: <http://dhmf.maryland.gov/flusurvey>

NOTE: This weekly review is a compilation of data from various surveillance systems, interpreted with a focus on a potential BT event. It is not meant to be inclusive of all epidemiology data available, nor is it meant to imply that every activity reported is a definitive BT event. International reports of outbreaks due to organisms on the CDC Critical Biological Agent list will also be reported. While not "secure", please handle this information in a professional manner. Please feel free to distribute within your organization, as you feel appropriate, to other professional staff involved in emergency preparedness and infection control.

For questions about the content of this review or if you have received this and do not wish to receive these weekly notices, please e-mail me. If you have information that is pertinent to this notification process, please send it to me to be included in the routine report.

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Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents

Table: Text-based Syndrome Case Definitions and Associated Category A Conditions

Syndrome	Definition	Category A Condition
Botulism-like	ACUTE condition that may represent exposure to botulinum toxin ACUTE paralytic conditions consistent with botulism: cranial nerve VI (lateral rectus) palsy, ptosis, dilated pupils, decreased gag reflex, media rectus palsy. ACUTE descending motor paralysis (including muscles of respiration) ACUTE symptoms consistent with botulism: diplopia, dry mouth, dysphagia, difficulty focusing to a near point.	Botulism
Hemorrhagic Illness	SPECIFIC diagnosis of any virus that causes viral hemorrhagic fever (VHF): yellow fever, dengue, Rift Valley fever, Crimean-Congo HF, Kyasanur Forest disease, Omsk HF, Hantaan, Junin, Machupo, Lassa, Marburg, Ebola ACUTE condition with multiple organ involvement that may be consistent with exposure to any virus that causes VHF ACUTE blood abnormalities consistent with VHF: leukopenia, neutropenia, thrombocytopenia, decreased clotting factors, albuminuria	VHF
Lymphadenitis	ACUTE regional lymph node swelling and/ or infection (painful bubo- particularly in groin, axilla or neck)	Plague (Bubonic)
Localized Cutaneous Lesion	SPECIFIC diagnosis of localized cutaneous lesion/ ulcer consistent with cutaneous anthrax or tularemia ACUTE localized edema and/ or cutaneous lesion/ vesicle, ulcer, eschar that may be consistent with cutaneous anthrax or tularemia INCLUDES insect bites EXCLUDES any lesion disseminated over the body or generalized rash EXCLUDES diabetic ulcer and ulcer associated with peripheral vascular disease	Anthrax (cutaneous) Tularemia
Gastrointestinal	ACUTE infection of the upper and/ or lower gastrointestinal (GI) tract SPECIFIC diagnosis of acute GI distress such as Salmonella gastroenteritis ACUTE non-specific symptoms of GI distress such as nausea, vomiting, or diarrhea EXCLUDES any chronic conditions such as inflammatory bowel syndrome	Anthrax (gastrointestinal)

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Respiratory	<p>ACUTE infection of the upper and/ or lower respiratory tract (from the oropharynx to the lungs, includes otitis media)</p> <p>SPECIFIC diagnosis of acute respiratory tract infection (RTI) such as pneumonia due to parainfluenza virus</p> <p>ACUTE non-specific diagnosis of RTI such as sinusitis, pharyngitis, laryngitis</p> <p>ACUTE non-specific symptoms of RTI such as cough, stridor, shortness of breath, throat pain</p> <p>EXCLUDES chronic conditions such as chronic bronchitis, asthma without acute exacerbation, chronic sinusitis, allergic conditions (Note: INCLUDE <i>acute exacerbation</i> of chronic illnesses.)</p>	<p>Anthrax (inhalational)</p> <p>Tularemia</p> <p>Plague (pneumonic)</p>
Neurological	<p>ACUTE neurological infection of the central nervous system (CNS)</p> <p>SPECIFIC diagnosis of acute CNS infection such as pneumococcal meningitis, viral encephalitis</p> <p>ACUTE non-specific diagnosis of CNS infection such as meningitis not otherwise specified (NOS), encephalitis NOS, encephalopathy NOS</p> <p>ACUTE non-specific symptoms of CNS infection such as meningismus, delirium</p> <p>EXCLUDES any chronic, hereditary or degenerative conditions of the CNS such as obstructive hydrocephalus, Parkinson's, Alzheimer's</p>	Not applicable
Rash	<p>ACUTE condition that may present as consistent with smallpox (macules, papules, vesicles predominantly of face/arms/legs)</p> <p>SPECIFIC diagnosis of acute rash such as chicken pox in person > XX years of age (base age cut-off on data interpretation) or smallpox</p> <p>ACUTE non-specific diagnosis of rash compatible with infectious disease, such as viral exanthem</p> <p>EXCLUDES allergic or inflammatory skin conditions such as contact or seborrheic dermatitis, rosacea</p> <p>EXCLUDES rash NOS, rash due to poison ivy, sunburn, and eczema</p>	Smallpox
Specific Infection	<p>ACUTE infection of known cause not covered in other syndrome groups, usually has more generalized symptoms (i.e., not just respiratory or gastrointestinal)</p> <p>INCLUDES septicemia from known bacteria</p> <p>INCLUDES other febrile illnesses such as scarlet fever</p>	Not applicable

Syndrome Definitions for Diseases Associated with Critical Bioterrorism-associated Agents
(continued from previous page)

Syndrome	Definition	Category A Condition
Fever	<p>ACUTE potentially febrile illness of origin not specified</p> <p>INCLUDES fever and septicemia not otherwise specified</p> <p>INCLUDES unspecified viral illness even though unknown if fever is present</p> <p>EXCLUDE entry in this syndrome category if more specific diagnostic code is present allowing same patient visit to be categorized as respiratory, neurological or gastrointestinal illness syndrome</p>	Not applicable
Severe Illness or Death potentially due to infectious disease	<p>ACUTE onset of shock or coma from potentially infectious causes</p> <p>EXCLUDES shock from trauma</p> <p>INCLUDES SUDDEN death, death in emergency room, intrauterine deaths, fetal death, spontaneous abortion, and still births</p> <p>EXCLUDES induced fetal abortions, deaths of unknown cause, and unattended deaths</p>	Not applicable